Rpt. 13.

THIIR. 23 SEP 1909

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REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 21704

Port of Hull. Date of First Survey July 27 Date of Last Survey Aug 27 No. of Visits 10

No. in Reg. Book 160. on the ~~Iron or~~ Steel S. S. HALLER. Port belonging to Hull.

Built at Selby. By whom Cochran & Sons When built 1909.

Owners C. R. Haller Ltd. Owners' Address Hull

Yard No. 450. Electric Light Installation fitted by Wilfred Taylor & Co. When fitted 1909

DESCRIPTION OF DYNAMO, ENGINE, ETC.

De Laval Steam Turbine coupled to a continuous current compound wound dynamo.

Capacity of Dynamo 44 Amperes at 100 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Starb'd side engine room Whether single or double wire system is used double.

Position of Main Switch Board Engine room having switches to groups 5 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Chart Room 8. Cabin Stairs 8.

Engine Room 8. Other switches local.

If cut outs are fitted on main switch board to the cables of main circuit Yes. and on each auxiliary switch board to the cables of auxiliary circuits Yes. and at each position where a cable is branched or reduced in size Yes. and to each lamp circuit Yes.

If vessel is wired on the double wire system are cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits Yes.

Are the cut outs of non-oxidizable metal Yes. and constructed to fuse at an excess of 25% per cent over the normal current

Are all cut outs fitted in easily accessible positions Yes. Are the fuses of standard dimensions Yes. If wire fuses are used are permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit Yes.

Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases Yes

Total number of lights provided for 88. arranged in the following groups :—

A	28	lights each of	16	candle power requiring a total current of	9·8	Amperes
B	31	lights each of	16	candle power requiring a total current of	10·8	Amperes
C	12 Cargo	lights each of	16	candle power requiring a total current of	4·2	Amperes
D	12 Cargo	lights each of	16	candle power requiring a total current of	4·2	Amperes
E	5 Skaming	lights each of	32	candle power requiring a total current of	6	Amperes
2	Mast head lights with 1	lamps each of	32	candle power requiring a total current of	2·4	Amperes
2	Side lights with 1	lamps each of	32	candle power requiring a total current of	2·4	Amperes
4	Cargo lights of	6-16		candle power, whether incandescent or arc lights	incandescent	

If arc lights, what protection is provided against fire, sparks, &c. ✓

Where are the switches controlling the masthead and side lights placed Chart Room

DESCRIPTION OF CABLES.

Main cable carrying 35 Amperes, comprised of 19 wires, each 17 L.S.G. diameter, ·046 square inches total sectional area

Branch cables carrying 10·8 Amperes, comprised of 7 wires, each 18 L.S.G. diameter, ·012 square inches total sectional area

Branch cables carrying 6 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, ·007 square inches total sectional area

Leads to lamps carrying 1·75 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, ·0018 square inches total sectional area

Cargo light cables carrying 42 Amperes, comprised of 7 wires, each 22 L.S.G. diameter, ·004 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Insulated with pure vulcanised india rubber, the whole vulcanised together tapes, lead covered, served & armoured with G. I. wire. Wires in cabins lead covered.

Joints in cables, how made, insulated, and protected None.

Are all the joints of cables thoroughly soldered, resin only having been used as a flux ✓ Are all joints in accessible positions, none being made in bunkers, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage ✓

Are there any joints in or branches from the cable leading from dynamo to main switch board None.

How are the cables led through the ship, and how protected Armoured, led in under side of deck fastened with screwed clips & thro' W.T. bulkheads in screwed glands.

DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible Yes.

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture Lead covered & armoured

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat —

What special protection has been provided for the cables near boiler casings —

What special protection has been provided for the cables in engine room —

How are cables carried through beams Cast tubes *through bulkheads, &c.* W. T. Glands

How are cables carried through decks Water tight cast tube

Are any cables run through coal bunkers Yes *or cargo spaces* Yes *or spaces which may be used for carrying cargo, stores, or baggage* Yes

If so, how are they protected Lead covered & armoured

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage in cargo holds.

If so, how are the lamp fittings and cable terminals specially protected Watertight fittings with guards

Where are the main switches and cut outs for these lights fitted Cabin entrance

If in the spaces, how are they specially protected —

Are any switches or cut outs fitted in bunkers None

Cargo light cables, whether portable or permanently fixed Portable *How fixed* By W. T. Plugs.

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel ✓

How are the returns from the lamps connected to the hull ✓

Are all the joints with the hull in accessible positions ✓

The installation is —— *supplied with a voltmeter and* —— *an amperemeter, fixed* By Switch board in Eng Room

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas ✓

Are any switches, cut outs, or joints of cables fitted in the pump room or companion ✓

How are the lamps specially protected in places liable to the accumulation of vapour or gas ✓

The copper used is guaranteed to have a conductivity of 100 *per cent. that of pure copper.*

Insulation of cables is guaranteed to have a resistance of not less than 600 *megohms per statute mile after 24 hours' immersion in seawater.*

The foregoing statements are a correct description of the Electric Light installation fitted by us on this vessel and we declare that it is at this date in good order and safe working condition.

Mulliner Taylor & Co. *Electrical Engineers* *Date* 18.9.09.

COMPASSES.

Distance between dynamo or electric motors and standard compass ——

Distance between dynamo or electric motors and steering compass ——

The nearest cables to the compasses are as follows :—

A cable carrying —— *Amperes* —— *feet from standard compass* —— *feet from steering compass*

A cable carrying —— *Amperes* —— *feet from standard compass* —— *feet from steering compass*

A cable carrying —— *Amperes* —— *feet from standard compass* —— *feet from steering compass*

Have the compasses been adjusted with and without the electric installation at work at full power ——

The maximum deviation due to electric currents, etc., was found to be —— *degrees on* —— *course in the case of the standard compass and* —— *degrees on* —— *course in the case of the steering compass.*

Cochrane & Sons *Builder's Signature.* *Date* ——

GENERAL REMARKS. This installation of electric light as far as can be seen is well fitted & the workmanship good. Tried under full working conditions & found satisfactory

John W. Gwynne

Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute ——

Elec Light
J.R.M.
24/9/09

Im.8.7.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.